Application/Control Number: 09/877,809
Amdt. Dated September 29, 2004
Reply to Office Action of July 1, 2004
Applicant: Jay Warren Gardner

Remarks/Arguments

I believe there is a typographical error in item 3 of Detailed Action dated July 1, 2004 in the beginning of the sentence. I believe the reference to "Claims 14 – 26 . . " should read "Claims 24 – 26 . . ". With this correction, item 3 would be in agreement with item 5 of the same Detailed Action "Claims 1 – 23 are allowed.". This correction would also create agreement with the Office Action Summary, under "Disposition of Claims" Item 5, included in the mailing of the same Detailed Action.

Claims 24 – 49 are identified as "allowable if rewritten or amended to overcome the rejections under 35 U.S.C 112, second paragraph, set forth in this Office Action." To identify support for these method claims as rewritten please see the following citations from the original application. On page 10 of the original application, the second sentence of the second paragraph quoted below:

> In alternative embodiments, the generator monitor can interface with the electrical system at a plurality of locations, such as integrated into the home circuit panel, or built into the generator by the manufacturer where the generator monitor can measure the momentary power from the generator 11.

Also please see page 19 of the original application, the last complete sentence on the page, quoted below:

> For interrupt switches that were set with surge and continuous loads manually, or for switches built into the appliance by the manufacturer, the reset button would not be necessary.

Also please see page 28 of the original application, the 9th and 10th sentences beginning in the middle of the page, quoted below:

> The appliance maximum loads could be measured by the interrupt switch, set manually by the user, or determined and preset by the manufacturer. Manufacturers of such appliances could also incorporate this feature into the on off switch of the appliance, allowing both functions to be implemented with the same switch.

The citations above demonstrate the intent of the description to include the

incorporation of methods described in other systems and apparatus. Accordingly, the reconsideration of Claims 27 – 49 as rewritten is respectfully requested. As a result of previous Claims 24 – 26 and Claims 50 – 52 being canceled, Claims 27 – 49 are renumbered in the clean set of claims in the appendix as Claims 24 – 46 with the claim number references in the dependent claims adjusted accordingly.

If prosecution of the application can be expedited by telephone, the Examiner is invited to call the undersigned at the number below. Thank you for your assistance.

Respectfully submitted,

Jay W. Gardner

Jay W. Gardner
Tel.: (978) 689-9657

APPENDIX

I claim:

1. An electric power monitoring system comprising:

a source monitor for measuring momentary power output of an electric source supplying electric power to a power distribution system having at least one electric load;

means for comparing the momentary power output with a reference load capability for the electric source to determine the ability of the electric source to support additional load, and for transmitting load capability data based on the load capability; and

at least one load control for receiving the transmitted load capability data and controlling the supply of power to the at least one corresponding electric load based on the load capability data.

2. The electric power monitoring system of claim 1 wherein the reference load capability is determined based on at least one of a reference surge load and a reference continuous load.

3. The electric power monitoring system of claim 2 wherein the reference surge load or reference continuous load are programmable according to time of day.

4. The electric power monitoring system of claim 1 wherein the source monitor comprises multiple source monitors, and wherein the means for comparing compares the momentary power output with multiple reference load capabilities, and transmits multiple load capability data to respective multiple loads according to unique load identifiers.

5. The electric power monitoring system of claim 1 wherein the reference load is adjusted in accordance with electric source drive capability, electric source efficiency, or predetermined load patterns, during a power source initialization.

6. The electric power monitoring system of claim 1 wherein the at least one load control comprises an interrupt switch for interrupting the supply of power to the electric load when the transmitted load capability is less than a predetermined level.

7. The electric power monitoring system of claim 6 wherein the interrupt switch interrupts the supply of power for an interrupt time period upon the return of power following a power failure condition.

8. The electric power monitoring system of claim 7 wherein the interrupt time period is set to delays the return of power for a period of time for the purpose of reducing the total sudden load on the main power source at initial power return.

9. The electric power monitoring system of claim 6 wherein the interrupt switch further monitors electric power levels drawn by the at least one electric load and interrupts the supply of power to the electric load when the transmitted load capability is less than the monitored power levels of the at least one electric load.

10. The electric power monitoring system of claim 6 wherein the interrupt switch delays interruption of the supply of power until the electric load has completed an operation cycle.

11. The electric power monitoring system of claim 6 wherein the interrupt switch delays interruption of the supply of power until the electric load has completed an operation cycle if the electric load's continuous load level is substantially equal to a predetermined level of normal operation.

12. The electric power monitoring system of claim 6 wherein the interrupt switch further comprises a signal transmission system that transmits interrupt switch identifier data and interrupt switch status data.

13. The electric power monitoring system of claim 12 wherein a switch open status is transmitted when the switch is open and wherein a switch closed status is transmitted just prior to closing the switch for transmitting status data when the corresponding electric load is without power and thereby unable to emit any electromagnetic interference that would compromise the interrupt switch status transmission.

14. The electric power monitoring system of claim 1 further comprising a user interface indicating a condition of whether the electric source has sufficient load capability for supplying electrical power to the at least one electric load.

15. The electric power monitoring system of claim 14 wherein the user interface receives and displays data from the at least one load control related to the electric load level.

16. The electric power monitoring system of claim 14 wherein the user interface interprets a first difference in surge load capability in excess of the continuous load capability and compares this difference to a second difference between a start up surge and continuous load of electric load and determines a power level reported to the user on the interface.

17. The electric power monitoring system of claim 12 further comprising a user interface for reporting the interrupt switch status data to a user.

18. The electric power monitoring system of claim 17 wherein the user interface measures the time period an interrupt switch is open and reports data related the time period to a user.

19. The electric power monitoring system of claim 17 wherein the electric source is a fuel-based generator, wherein the source monitor measures fuel level in a fuel tank for the generator, and wherein fuel data based on the fuel level is provided on the user interface.

20. The electric power monitoring system of claim 19 wherein the user interface measures total electric power consumed by the power distribution system, measures the fuel consumed for generating the power, and presents a cost per energy unit for comparison with current or available utility rates.

21. The electric power monitoring system of claim 1 wherein the at least one load control comprises a variable circuit breaker that adjusts dynamically to the transmitted load capability.

22. The electric power monitoring system of claim 1 wherein the at least one load control comprises an outlet adapter that closes an outlet to an appliance plug when load capability from the electric source is below a predetermined level.

23. The electric power monitoring system of claim 1 wherein the load capability is determined based on a reference output intended to reduce power consumption during peak load or reduced power conditions.

24. An electric power monitoring method for measuring momentary power output of an electric source supplying electric power to a power distribution system having at least one electric load;

means for comparing the momentary power output with a reference load capability for the electric source to determine the ability of the electric source to support additional load, and for transmitting load capability data based on the load capability; and

at least one load control for receiving the transmitted load capability data and controlling the supply of power to the at least one corresponding electric load based on the load capability data.

25. The electric power monitoring method of claim 24 wherein the reference load capability is determined based on at least one of a reference surge load and a reference continuous load.

26. The electric power monitoring method of claim 25 wherein the reference surge load or reference continuous load are programmable according to time of day.

27. The electric power monitoring method of claim 24 wherein the electric source comprises multiple source measurements, and wherein the means for comparing compares the momentary power output with multiple reference load capabilities, and transmits multiple load capability data to respective multiple loads according to unique load identifiers.

28. The electric power monitoring method of claim 24 wherein the reference load is adjusted in accordance with electric source drive capability, electric source efficiency, or predetermined load patterns, during a power source initialization.

29. The electric power monitoring method of claim 24 wherein the at least one load control comprises a method for interrupting the supply of power to the electric load, or preventing the electric load from initiating and applying its load, when the transmitted load capability is less than a predetermined level.

30. The electric power monitoring method of claim 29 wherein the load control interrupts the supply of power, or initiation of the load, for an interrupt time period upon the return of power following a power failure condition.

31. The electric power monitoring method of claim 30 wherein the interrupt time period is set to delays the return of power, or initiation of the load, for a period of time for the purpose of reducing the total sudden load on the main power source at initial power return.

32. The electric power monitoring method of claim 29 wherein the electric power levels drawn by the at least one electric load are monitored and the supply of power to the electric load is interrupted or the running of the load is stopped, when the transmitted load capability is less than the monitored power levels of the at least one electric load.

33. The electric power monitoring method of claim 29 wherein the load control delays interruption of the supply of power until the electric load has completed an operation cycle.

34. The electric power monitoring method of claim 29 wherein the load control delays interruption of the supply of power until the electric load has completed an operation cycle if the electric load's continuous load level is substantially equal to a predetermined level of normal operation.

35. The electric power monitoring method of claim 29 wherein the load control further comprises a signal transmission method that transmits load identifier data and load status data.

36. The electric power monitoring method of claim 35 wherein a load control off or load interrupted status is transmitted when the load control is interrupting power and wherein a load control on status, or power enabled status, is transmitted just prior to the load control returning power, or initiating the load, for the purpose of transmitting status data when the corresponding electric load is not running, or without power and thereby unable to emit any electromagnetic interference that would compromise the status transmission.

37. The electric power monitoring method of claim 24 whereby a user interface indicates a condition of whether the electric source has sufficient load capability for supplying electrical power to the at least one electric load.

38. The electric power monitoring method of claim 37 wherein a user interface receives and displays data from the at least one load control related to the electric load level.

39. The electric power monitoring method of claim 37 wherein the difference in surge load capability in excess of the continuous load capability is compared to a second difference between a start up surge and continuous load of an electric load and determines a power level for the electric load to be reported to the user on a user interface.

40. The electric power monitoring method of claim 35 whereby a user interface reports the load control status data to a user.

RECEIVED
CENTRAL FAX CENTER
SEP 2 9 2004

41. The electric power monitoring method of claim 40 wherein the time period a load control has interrupted power, or has prevented the electric load from initiating, is measured and data related to the time period is reported to a user via a user interface.

42. The electric power monitoring method of claim 40 wherein the electric source is a fuel-based generator, wherein the fuel level in a fuel tank for the generator is measured, and wherein fuel data based on the fuel level is provided on a user interface.

43. The electric power monitoring method of claim 42 wherein a measure of total electric power consumed by the power distribution system, is evaluated with a measure of fuel consumed for generating the power, and a cost per energy unit, for comparison with current or available utility rates is presented to the user.

44. The electric power monitoring method of claim 24 wherein the at least one load control controls a variable circuit breaker that adjusts dynamically to the transmitted load capability.

45. The electric power monitoring method of claim 24 wherein the at least one load control controls an outlet adapter that closes an outlet to an appliance plug when load capability from the electric source is below a predetermined level.

46. The electric power monitoring method of claim 24 wherein the load capability is determined based on a reference output intended to reduce power consumption during peak load or reduced power conditions.